DR. ROSS INTERVIEW ON C.B.C RADIO

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(The interview was in progress when this transcript starts)

Dr. Ross The doctor and doctors in general are not yet smart enough to understand all of the ramifications of the symptoms that can be produced in the patients with chemical sensitivities.

CBC So really I suppose what is necessary for these things to be diagnosed more widely is for the whole idea of medical diagnostics to change, a sort of new paradigm if you want.

Dr. Ross That is correct and we are learning more and more about the adverse influences of the environment on health and we all know about that. We talk about air pollution more and more, we are seeing problems of sick building syndrome with indoor air contamination causing significant effects.. sometime those effects are rather soft.. in the sense that people will complain of headaches or they just don't feel well or they are disoriented and they can't think.

CBC Tired?

Dr. Ross They are tired, they can't think, they have more aches and pains, and because there are not so many objective criteria that the doctor can latch on to and say,"Ah ha, this is wrong". There is no blood test, for instance, that you can take and say, "Ah okay, this patient has chemical sensitivity or is being affected by sick building syndrome". The doctors often dismiss it as being emotionally generated, it is just they don't like their job or their boss is on their back or so on. We are now getting to the point of being able to sophisticatedly investigate some of these complaints and do it with high tech types of equipment that give us hard answers.

CBC Not to discount the real possibility that somebody may in fact be using sick building syndrome, which is much in the news these days, as in fact a kind of excuse. I mean lots of people don't like their jobs.

Dr. Ross That is right and the doctor always has to consider the total patient in the evaluation. I think that for the most part however, in all the patients that I have seen, there has only been a few that I have felt really were

not a true blue case . Although, on occasion, I think, we all have to recognize that we are a mixture of psyche and soma and our health and its expression is the result of a complex interplay of factors, including physical and emotional and sociological and family and genetics and it all adds up.

CBC If somebody comes to you demonstrating these symptoms, how do you go about making your diagnosis? What kinds of questions do you ask them? It must have to be a very thorough exam, as you have just indicated, taking into account all kinds of things.

Dr. Ross It is. It is much more time consuming than most medical practices. And that is one of the reasons why it's more difficult at times to get to the bottom of the problems, because there may have been a whole sequence of events that lead up to the present problem. But, anyway, as far as the questions are concerned, in environmental medicine, which is the term that is increasingly being used to this orientation, looking at the patient in the context of his or her environment, the history is by far and away the most important. And a careful history will sometimes reveal very significant things that took place that led up to the present problem. Just this morning, here in Dallas, I evaluated a patient from Nova Scotia. Now, there is a clinic that I run in Nova Scotia for the government there. It is called the Nova Scotia Environmental Medicine Clinic.

CBC Right.

Dr. Ross But there is a tremendous waiting list for patients there. There's over 500 people waiting to get in and the waiting list is in excess of four years. It is absolutely ridiculous. So this patient decided that her problems were significant enough to come to Dallas. She is a good illustration, because this was the sequence of events during my interview with her this morning. How old is your home? Ten years old. How long have you lived there? Ten years. Did you move into it when it was brand new? Yes we did. Did you move into it before it was completely finished? Yes we did. So in other words, you moved into it and continued to do things like painting and wood-working and laying carpets and so on while you lived in the home? Yes we did. And, you see Bill, that sequence of events is notorious for significant exposures to all kinds of indoor air pollutants.

CBC Uh huh! Stuff from the new carpets, stuff from new paint, all those things..?

Dr. Ross Exactly. All the chemicals that go into the manufacture of those kinds of paint, and carpeting, and underlay, and varnishes and so on, and glues and caulking. It all outgases, it evaporates in other words. It pollutes the indoor air of the home. And you can measure those chemicals inside people.

CBC What were this woman's symptoms?

Dr. Ross Her symptoms were compounded by the fact that she was also working in a sick building in Halifax.

CBC Great!

Dr. Ross That is also notorious, but she had a lot of respiratory distress with breathlessness and difficulty getting her air. She would have headaches and disorientation --brain fog-- and that is very frequent among the chemically sensitive patients. They often have a great deal of difficulty with concentration. They get into what is commonly called a brain fog. Whereby they know that they are impaired, so to speak, but it is almost like they are drunk but they are not drunk. They can't think and concentrate and they know that they can't. And it is often very distressing for people, especially when they are used to clarity of thought.

CBC And how long has this been going on for her? For as long as ten years?

Dr. Ross No, she didn't have problems initially in the home. But I point that out as one illustration of the kinds of exposures that are fairly common, that may set the stage for a later problem. She has been ill for a couple of years.

CBC When you look at her, and at the other people who share that home, is there anything about her that would indicate that she would have any particular predisposition to showing these sensitivities, whereas her husband or her children or whoever she lives with might not have?

Dr. Ross That is a good question. In fact, there are some patterns that appear to be evident in patients who develop chemical sensitivities. There has been very little study done on this, as far as large epidemiological studies. There is a crying need to do this. But I have found in my experience, there is a much higher incidence in these patients of regular allergy. Allergy like asthma or hay fever or eczema, especially when they were younger. There is also a much higher

incidence in the family, or in the patient, of migraine headache. We know that migraine, for instance, can be triggered by certain kinds of foods or chemical substance exposure, like chocolate, certain kinds of wine and cheeses and so on, are known to trigger headaches, probably because of certain kinds of ingredients in those foods. The other thing that I find is that there is a higher incidence of alcoholism in the family. And I suspect that is partly on a genetic basis. There are some interesting theories about the potential genetic implications of alcoholism.

CBC So although the patient, him or herself may not be alcoholic, the fact that there is alcoholism in the family indicates some kind of predisposition?

Dr. Ross That is correct.

CBC How weird, I wonder what is going on there?

Dr. Ross Well, I suspect that it is representative of a different way in which the body handles toxins. An alcoholic often becomes really quite addicted and sensitized to the alcohol. And they have cravings for it. We see many chemically sensitive patients who have similar kinds of cravings, strangely for certain foods or for certain kinds of chemical exposures. Some people like the smell of gasoline or new paint or whatnot. And they will seek it out, on occasion, not in a terribly addictive way, like glue sniffing, but they like it. At the same time it does them harm. They may have cravings for certain kinds of foods that will produce adverse symptoms, but there is a tremendous craving. We see that especially with sugar and with chocolate, but sometimes with cheeses and bread.

CBC If people who show these chemical sensitivities also often have other allergies that are operative, this would maybe suggest that they are in some way immune compromised?

Dr. Ross There has been mixed results as far as the investigation of the immune system in these patients. Some people have found that there is significant immune suppression. We have found in investigating these people in Dallas that there is often immune deregulation. They may have lower numbers of certain kinds of lymphocytes. They may have a greatly impaired ability of the white blood cells to marshall an attack against foreign invading germs. But one of the fascinating things that we are finding in the chemically sensitive patients, and we have published on this out of Dallas, is that they have an inherent

instability in the way the autonomic nervous system regulates body systems.

CBC Autonomic? Meaning?

Dr. Ross Autonomic meaning automatic. In other words, if you want to move your arm, that is a wilful decision, but the autonomic nervous system will be implicated in the regulation of your blood pressure, and your heart beat, and your body temperature, and the calibre and the size of your blood vessels and so on, and the pupil response. Like when a little light shines in the eye, the pupil, it will constrict, then it will dilate again and that is all automatic. It is all controlled by the autonomic nervous system. We've measured sophisticated things having to do with the stability of the autonomic nervous system in these patients and find that they are really very different from other people. We don't know why. But it suggests that they are much more at risk of developing neurological and other kinds of symptoms when they are exposed to things to which they have become sensitized.

CBC Are there cases when you can do these tests before chemical sensitivities actually rear their ugly heads and know that this may be the case for this person, so they can take some kind of precaution?

Dr. Ross That is a good question because it raises the whole issue, and indeed, the issue of prevention. Indeed there is some evidence that the chemically sensitive patients are impaired in their ability to detoxify and we've done studies whereby we've looked at healthy volunteer controls and compared them to chemically sensitive patients and we've looked at the amount of chemicals that were in each of these two groups. We had twenty-five of each. And it was a prospective study so that we decided to go ahead and look at these people and compare the groups. What we found was the chemically sensitive patients had far more different kinds in them than other people did. Than the healthy volunteer controls, and that was in spite of the fact that the sensitive patients knew that they seem to have problems around chemicals and would take pains to avoid them. And it suggests to me that for some reason or another that they seem to absorb and store these substances and not be able to get rid of them as well as do normal people.

CBC There is so much to be found out about this. We've mentioned migraines, the immune system. These are things that are very much in the news ever since AIDS, of course, and it has been what, 12-14 years now? We have all learned so much more about the fact that we possess

these things called immune systems. It sounds to me that the work that you are doing here could very well have pretty wide-reaching implications beyond treating people with chemical sensitivities. This must all just be part of a piece.

Dr. Ross That is correct. We often look upon the chemically sensitive patient as being like, say, the proverbial canary in the mines. And miners used to take a canary down into the mines. They would watch the canary closely and if the canary died, they knew that the mine gas, the poisonous gases that were dangerous to them, were beginning to build up, and they would have time to get out. The canary was far more sensitive to the gas then they were. Now the chemically sensitive patients appear to be like the canaries. They are more sensitive to the things that we are commonly exposed to. That all of us may be affected by, but they happen to react first. We can demonstrate that even in ordinary individuals, that if they are subjected to a mental task that is timed, like an arithmetic test or something like that, there have been studies done on this, and they do it under clean conditions, then they do it while they are being exposed to a chemical substance that has no odour, in very low concentrations, the patient has no idea whether they are being exposed to a chemical substance or not. Even normal people, when they are being exposed to the chemical substance, have a statistically significant decrease in the brain to work with these mental tasks. So it is not to hard to understand that inside new buildings and sick buildings, that have all kinds of indoor air contamination, that it may be a significant impairment as far as the patient's functioning ability and has tremendous implications financially, as you may well imagine. I mean all the lost productivity.

CBC Yeah, and I would think, as well, tremendous implications financially. There must be companies or contractors or construction firms very nervous about this because, if in fact there are buildings full of carpets or dry walling or paint or whatever happens to be that are out-gassing all the time noxious fumes. There are some pretty severe implications here.

Dr. Ross Yes, there are. There are a lot of sociological and legal implications. And the classic example of that, which is really quite ironic, was in the Environmental Protection Agency Building in Washington, D.C.

CBC Really!

Dr. Ross They completely renovated it with new carpeting, back, I

think, about ten years ago. And hundreds and hundreds of people got sick. And some of them went on to develop chemical sensitivity to the point that they were unable to work in that building again. As far as chemically sensitive patients are concerned, there have been a couple of excellent studies and publications about this. And slowly the information is being absorbed by the medical community. It remains very controversial in some fields, because doctors have an inherent scepticism, I think, about things that they are not taught in medical school. But there has been a group in the U.S. that has published an excellent little book called " Chemical Exposures, Low Level and High Stakes". They were the first to identify four major groups of patients who seem to constitute the group of patients who have chemical sensitivities. One of the groups is identified as those who happen to be working in a sick building. In Halifax there is a very famous case now of what is probably the largest single case of sick building syndrome on record, and that is in Camp Hill Hospital.

CBC Is that were your patient worked? The one you saw today.

Dr. Ross She did not. She works in another hospital in Halifax that has also been recognized to have indoor air quality problems.

CBC How ironic... in hospitals!

Dr. Ross That is right! Well, in Camp Hill Hospital, there were, I think about twelve hundred employees, I think about seven hundred of them had been affected by the building and three hundred of them at one time or another have been off on full time disability. And some of these patients that I have evaluated on behalf of the hospital are extremely unwell. And they are really quite disabled. And it is quite a political issue in Halifax, because from a personal point of view, I don't think these patients are being treated appropriately.

CBC It leaves one to wonder, as well, what is happening to patients who are patients in the hospital while this is going on? I mean, if you are in a weakened state in any case, recovering from whatever it might be, then obviously this is not going to be the healthiest of environments. But, hopefully most aren't going to be there for a very prolonged time.

Dr. Ross You hit on the answer. Most people are in hospital for a few weeks at a time, whereas the staff work there on an ongoing basis. One of the most exciting things recently, in the investigation of these patients, is a brain

scanning technic called the Specscan. We know that a CT scan or an MRI scan can look at the anatomical structure of the brain . Specscan looks at the metabolic activity, or the biochemical activity, taking place in the brain. We are just nearing the completion of a study whereby we've compared about one hundred and eighty chemically sensitive patients to a group of healthy volunteer controls, and there are striking differences in the chemically sensitive patient. There is a disordered pattern of brain activity that can be best described as a neuro-toxic effect. As a matter of fact, a radiologist with whom we are working, said that they had not seen this as a group before, except in people who had been drug abusers. People who had done things like sniffing glue or had abused cocaine or amphetamines and they are just absolutely amazed at what is happening when we are looking at the chemically sensitive patient, especially when they are reacting to something to which they are sensitive. There are profound abnormalities in the way the brain works.

CBC The real tragedy here is that, behind all these statistics, there are individual very sad stories. Each one of these statistics is somebody whose life has been completely turned around. And anyone who is suffering from this, with this, must become acutely aware of what the world around them is made from now.

Dr. Ross That is true. And I think that the message that we have to put out is ..

Number one...
the problems are real.

Number two...
that they are treatable.

Number three...
that they are preventable, and this is getting back to the point that you made earlier. As we learn more about environmental influences on health, we have to recognize that there are things that we can do as far as building construction, both in the home and in commercial buildings, and in hospitals, "classic example", whereby we can minimize the kinds of exposures inside those buildings that tend to lead to the induction of chemical sensitivity. There are many things that can be done for a chemically sensitive patient that most of the medical profession is not yet aware of. So there is a real need. Most of these people can get back to productive lifestyles and indeed get back to

work in the right settings, and that is the ultimate goal.

CBC But I would suppose with some kind of cautionary adage at the forefront of their brains, that there must always be things that they always be aware of avoiding.

Dr. Ross Well, that is correct. I am perhaps a good example of that, because I was disabled for almost five years, either not able to work or only able to work only on a part-time basis, and then limited. And it was very discouraging.

CBC I can imagine!

Dr. Ross You really wonder about what is going to happen with the future, and am I going to be able to provide for my wife and family? One goes through a lot of self-examination and especially when my medical colleagues, in spite of their excellent training, were not knowledgeable enough, at that point, to be able to offer some help, until I sought out a specialized facility here in the States. The Nova Scotia Environmental Medicine Clinic, in Halifax, is the first of its kind in the world where there is actually government support for the assessment and treatment of patients with chemical sensitivity. And Canada actually leads the world, in some ways, with this, because the Ontario Government has designated chemical sensitivity as a research interest and has funded several thousands of dollars worth of research projects, trying to increase our knowledge of these problems. And the Ontario Government has been interested in trying to help these patients.

CBC How did this happen in Nova Scotia to begin with? What was going on there that made this possible?

Dr. Ross Well, it was partly because I became unwell, and after I was treated enough to regain my health, I suggested that we needed a lot more medical expertise in this field of environmental medicine. I suggested to the Government that I would like to do a fellowship, to do a couple years of specialized training in this. And it is not possible to go to medical school and into a residency kind of programme and to learn about chemical sensitivity. It is too new. And so the Government of Nova Scotia supported me, partially, for a few years while I did this, and in return I have become a consultant to the province of Nova Scotia, and that is how this clinic got started, because there was a real need, and there were many identified patients who had these problems in that province. Since that time,

especially with the Camp Hill Hospital problems, with hundreds of people being ill, it has really come to the forefront. And we are hoping that the Government is going to take the results, of the outcome of the study, and the patient satisfaction survey that has been done of the patients that were being treated in Halifax and, hopefully, make some decisions about what the future will hold as far as a permanent clinic.

CBC And what has changed at Camp Hill Hospital?

Dr. Ross There have been millions of dollars put into studies at Camp Hill and refitting and changing the air handling mechanisms. I understand that the building is substantially cleaner than it was. Hopefully a large proportion of the people who are ill will be able to go back to work and feel reasonably okay. Unfortunately, however, like a person who has allergies, they may or may not be able to tolerate certain situations. The patient with chemical sensitivities is the same, once they become quite sensitized to certain substances, they simply may not function well in the presence of those substances, even if they are in very very small concentrations.

CBC As I hear you talk about this, it sounds reasoned and scientifically supported and eminently sensible. I know, however, that there will be dissenting views. Do you find that there are fewer and fewer people who say, "No, this is something else"?, and that there are more and more people coming onto the chemical sensitivity bandwagon, as it were?

Dr. Ross There is no doubt about that. I think that healthy scepticism in medicine is a very good attribute. I think that it is important for us to do that. We don't want to jump on every bandwagon that comes along. The weight of evidence about the reality of this problem has really become enormous. It is recognized as a potentially disabling condition by Health and Welfare Canada, by the U.S. Social Security Administration, as far as the Disability Division is concerned. It is recognized by the Environmental Protection Agency and The World Health Organization and large professional organizations are grappling with how we can increase our understanding of this. But you are quite right about a certain degree of scepticism, but it is changing. In Nova Scotia now we have had referrals from over one hundred and seventy or one hundred and ninety different physicians and so that there is an increasing acceptance that, yes, perhaps there are individuals who are being adversely affected by components of their environment. And we need to do a whole lot more coordinated research. I would like to see

that happen in Nova Scotia.

CBC And you are hail and hearty now? What do you have to avoid in your own life?

Dr. Ross I have to be cautious. I still have some degree of chemical sensitivities, I still am on a somewhat restricted diet. I have to be careful that I don't eat certain foods and I know that if I get into certain kinds of chemical environments, that if I don't get out of there reasonably quickly, that I will feel quite unwell later. I have delayed reactions of a lot of body pain, muscle aches and pains and joint pains. I may feel nauseated, light headed and dizzy and I can't think straight. I can't put two words in sequence properly and I grope for words. And for somebody professionally trained, that is a very distressing feeling. And when I was really ill and had no idea what was happening to me, that was a very scary feeling. I was wondering what was happening because these symptoms would come and go.

CBC Well I wish that I could have met you face-to-face, but I fear that you probably would have found the spilled perfume smell in here a little on the overpowering side.

Dr. Ross I wish you good luck with cleaning it up.

CBC Thank you very much

Dr. Ross It is a delight to speak with you Bill